Climate Adaptation Plan

2022 Progress Report

	Department of Homeland Security (DHS)
	Mr. R.D. Alles Acting Under Secretary for Management DHS Chief Sustainability Officer
	DHS Actions: Climate Change | Homeland Security (https://www.dhs.gov/dhs-actions-climate-change)

SECTION 1: UPDATES ON PRIORITY ACTIONS

1. Priority action progress summary

Priority Action Progress			
Action	**Current Status**	**Estimated date of completion**	**Brief Description of Progress**
Priority Action #1: Incorporate climate adaptation planning and processes into homeland security mission areas	In Progress	2023 and ongoing	Progress updates include Federal Emergency Management Agency's (FEMA) release of a Nature-Based Solutions Guide to help communities identify and engage staff and resources to build resilience to natural hazards. Updates to the National Flood Insurance Program's (NFIP) risk rating methodology and fixing inequities in flood insurance pricing. Improved accessibility to National Risk Index data online mapping tool and incorporation of data from the National Oceanic and Atmospheric Administration (NOAA) including sea level rise.
Priority Action #2: Ensure climate resilient facilities and infrastructure	In Progress	2023 and ongoing	Progress updates include submission of DHS Components updates to Component-level Resilience plans to the Office of the Chief Readiness Support Officer (OCRSO) which included updates to their critical asset vulnerability assessments using the DHS Resilience Baseline Assessment Scoring (RBAS) Tool. Developed internal tools for additional screening, accounting, and decision-analysis in the Building Assessment Tool which streamlines and consolidates facility condition assessments, and quadrennial audits for DHS-owned facilities, submitted Energy Legislation to capture energy savings from investments, and began Regional Resilience Assessments program to determine vulnerabilities at regional scales.

Priority Action #3: Incorporate climate adaptation into national preparedness and community grants and projects	In Progress	2023 and ongoing	Progress updates include use of Flood Mitigation Assistance (FMA) and Hazard Mitigation Grant Program (HMGP) to incentivize action toward climate resilience at the state and local level. For FY2020 and FY2021 funding cycles, the Building Resilient Infrastructure and Communities (BRIC) program selected hazard mitigation projects that that address climate adaptation: FY20 – 22 projects ($727.7 million); FY21 – 53 ($1.3 billion); including Flood Control, Utility/Infrastructure Protection, Wildfire Management, Relocation, and Saferoom/shelters. Additionally, 49 of the 75 selected competitive projects incorporate nature-based solutions. Increased funding for HMGP to $3.46 billion across the 59 major disaster declarations issued due to COVID-19. For FY 2022, increased funding for FMA grants to $800 million, and $2.295 billion for BRIC for risk reduction projects, which can include nature-based solutions. Use of the Centers for Disease Controls' Social Vulnerability Index prioritized underserved communities' projects.
Priority Action #4: Ensure climate-ready services and supplies	In Progress	2023 and ongoing	Progress updates include Cybersecurity and Infrastructure Security Agency (CISA) completion of an initial assessment of climate change risks to National Critical Functions (NCFs). DHS is incorporating climate science into its upcoming Strategic Approach to Arctic Homeland Security Implementation Plan as part of efforts to understand the homeland security implications of a changing climate in the Arctic region. DHS established an Emergency Fuel Supplies and Services contract to obtain fuel and fuel related support services during federal emergencies and major disasters.
Priority Action #5: Increase climate literacy	In Progress	2023 and ongoing	The three-track DHS Honors Climate Change program's initial cohort starts this summer, which is part of the Secretary's Honor Program, is comprised of DHS-specific core development courses, climate change-specific technical classes, and the use of practicums to satisfy on-the-job training objectives. The DHS-specific core development courses, developed through the Chief Human Capital Officer, represent training which orients the participants into DHS and provides them the necessary skills to succeed within the Department.

2. Priority Action Progress Examples

DHS partnered with Idaho National Laboratory (INL) to review case studies over the past two years that illustrate hazard impacts on regional critical infrastructure and sectors. Geospatial techniques measured vulnerabilities of specific critical infrastructure to different hazards. Critical sectors, such as transmission lines or transportation avenues, were overlayed with potential hazards to show geospatial proximity, generation capacity, and importance to the region. One example, the Edward Hyatt hydroelectric powerplant near Sacramento, CA closed in 2021 due to a drought hazard as the lake reached a historic low level. Another example involved Hurricane Ida that caused cascading impacts on the water sector along the coastline from Louisiana to New York City and severe damage to critical infrastructure in the mid-Atlantic regions. Finally, the Pickering West water treatment plant closed and caused a "boil water" notice and health issues for the Philadelphia area. DHS is using this regional assessment approach to identify risks to the climate crisis and propose projects to increase resilience and adapt to future conditions.

The USCG Training Center Petaluma proactively identified regional climate vulnerabilities and collaborated swiftly with federal partners to award an energy resilience project for 5 MW of new solar PV and an 11.6 MWh battery energy storage system (BESS). The Training Center supports approximately 3,500 students, 400 permanent staff, and 500 family housing residents in Petaluma, CA. Risk from recurring climate threats include wildfires, high-winds, drought, and power outages. This Energy Saving Performance Contract (ESPC) will be able to provide ten-days of self-sufficient operations for the Petaluma campus and strengthen Petaluma's capabilities as a Morale Welfare & Recreation (MWR) site during regional weather evacuation events. This is the first BESS project for the Coast Guard and will be the largest renewable energy project in the DHS portfolio.

FEMA engaged with the public during two outreach events to seek information on the agency's programs, regulations, and policies and how they could better advance equity, environmental justice, and bolster resilience to the impacts of climate change. Comments addressed matters on FEMA's role in the climate crisis such as the BRIC, HMGP, and FMA programs. The range of comments touched on the complexity of the application process and suggested ways to advance equity and promote resilient community solutions. Commenters expressed a desire for an increase in community outreach and education, and direct involvement with local and Tribal governments. The comments were addressed and considered in the development of the 2022-2026 FEMA Strategic Plan.

The Arctic circle is a vital region for transportation of supplies and security of our national borders and interests. DHS's Strategic Approach to the Arctic Homeland Security Implementation Plan is incorporating climate science, scenario planning, and decision analysis to better adapt and understand the changing Arctic region. Through this implementation plan, DHS will leverage its intelligence, resilience, and preparedness capabilities as well as the Coast Guard's longstanding presence in the Arctic to build more resilient DHS operations, but to also increase the resilience of Alaskan Native communities impacted by melting sea ice and increased human activity in the region. The initiatives in the implementation plan will enable DHS to learn more about the impact of climate change in the Arctic, deepen understanding of its role in combating and adapting to climate change, and identify positive actions it can take to address the climate crisis.

SECTION 2: UPDATES ON OTHER INITIAL PLAN TOPICS

1. Climate-Risk Reduction

The Department uses a structured method for assessing operating risk to climate-related hazards. Anticipated climate impacts on DHS facilities and infrastructure include higher average temperatures,

changing precipitation patterns, rapid Arctic change, more frequent severe storm events, rising sea levels, increased coastal flooding, increases in wildfires, and ecosystem degradation. The Under Secretary for Management, Director of Office of Operations Coordination, and Component Heads work in collaboration with the National Renewable Energy Laboratory (NREL) using the RBAS Tool to assess and prioritize Components' real property operating risks and vulnerabilities. In 2021, external dependency assessments added a climate indicator to identify key resilience options for regional climate hazards for all sectors (energy, water, telecommunications, transportation, fuels) to provide an analysis of how critical assets, utilities, critical infrastructure operators and supporting organizations currently implement climate related resilience activities. Initiatives include:

- Working aggressively to reduce the Department's carbon footprint and established goals to convert 50% of fleet to electric by 2030 in accordance with E.O. 14057
- Issued Resilience Framework in 2018 to address climate and manmade vulnerabilities in the Department's mission critical assets
- Energy Legislation to obtain 100% rebate for energy projects
- Developed tools to support resilience and energy assessments – RBAS Tool, Building Assessment Tool
- Conducting Regional Resilience Assessments
- Department of Energy (DOE)-DHS Memorandum of Understanding
- Counter Terrorism and Homeland Security Threats
    - DHS Strategic Approach for Arctic Homeland Security
- Secure U.S. Borders and Approaches
    - United States Coast Guard Arctic Strategic Outlook
    - Report on the Impact of Climate Change on Migration
- Secure Cyberspace and Critical Infrastructure
    - CISA Information and Communications Technology (ICT) Supply Chain Risk Management Task Force
- Preserve and Uphold the Nation's Prosperity and Economic Security
    - FEMA Community Resilience Guide
- Strengthen Preparedness and Resilience
    - DHS Resilience Framework | Homeland Security
    - DHS Crisis Information Management Framework for Regional Disaster Resiliency

DHS piloted an assessment of fiscal risk exposure due to climate change using survey information for utility interruption costs. The customer surveys attempt to address the impact of utility interruptions on mission operations. However, barriers exist for creating a robust and reliable metric to determine the amount of fiscal risk. Example of barriers includes data of tangible asset losses, accurate counts of curtailed operations, and case studies to confirm hypothesis. DHS undergoes Business Process Analysis and Business Impact Analysis biennially to determine the operational risk to the most essential assets and the criticality of those assets to execute essential functions.

2. Climate Vulnerability Assessments

The Department has completed over 100 vulnerability assessments since 2018, performed at the site or regional level. These assessments are ongoing and incorporated into agency policies and decision-making.

- E.O. 14008 tasked DHS to consider the implications of climate change to the NCFs, beginning with a report in January 2022
- CISA/NRMC developed an initial assessment of climate change impacts to NCFs, highlighting 27 NCFs expected to experience first-order impacts

- NCF decompositions will provide more granularity for future-year analyses and help CISA Components provide more specific risk mitigation measures to stakeholders
- CISA's National Risk Management Center (NRMC) will deliver an updated report every year, building on the analytical framework established for the 2022 report
- CISA identified eight "climate drivers" and assessed projected impacts to NCFs by 2030, 2050, and 2100 according to "current emissions" and "high emissions" scenarios. Current climate drivers are: Flooding, Extreme Tides and Sea-level Rise, Tropical Cyclones and Hurricanes, Severe Storm Systems (non-tropical), Extreme Cold, Extreme Heat, Wildfire, Drought
- Using the assessments already conducted, CISA can communicate these risks to stakeholders to help them prepare for the changes assessed to be most urgent

3. Climate Literacy

The Department began development of climate training programs on a broad scale. OCRSO, the Office of the Chief Human Capital Officer, Under Secretary for Management, Office for Civil Rights and Civil Liberties (CRCL), and Component Heads are increasing climate literacy among DHS employees, stakeholders, and volunteers by using training programs and other educational opportunities. The Department is committed to creating and growing a climate literate workforce that understands the principles of climate change, can assess scientifically credible information about climate, can communicate about climate change in a meaningful way, and is able to make informed decisions about climate change impacts on mission activities.

The agency is fostering a culture of knowledge and practice for climate adaptation with current programs and initiatives such as:

- Environmental Justice Strategy, signed by Secretary, May 2021
- Integration of the Justice40 Commitment
- Developing the first ever DHS Climate Honors Program
- Developing Workforce Training
- Dedicated website for climate change (DHS Actions: Climate Change | Homeland Security)
- Developing a common picture of understanding from scientific agencies such as the NOAA and National Aeronautics and Space Administration (NASA), and the U.S. Global Change Research Program

DHS developed the Secretary's Honors Climate Change Program by leveraging the existing Secretary's Honors Program involving Cyber Security. The implementation of a three-track program ensures there is enough trained workforce capacity for DHS to meet and exceed climate change goals formally. Using a combination of new graduates and existing DHS and/or Federal government employees, the first year's cohort of 10-12 participants will begin onboarding into the program by July 2022, filling Component-assigned billets specifically created to help DHS build climate change professionals.

4. Tribal Engagement

The Department considered Tribal Treaty Rights in Priority Action 4 through incorporation of the Coast Guard Arctic Strategy. This includes engagement with Tribal communities to better understand and prevent disproportionately high and adverse impacts related to services and supply chain resulting from climate change. Additionally, the Climate Action Plan considers the Department's Tribal Consultation Plan to strengthen government-to-government relationships by ensuring timely and meaningful consultation in the decision-making process where tribal implications exist. The Coast Guard continues to consult with Alaska Natives on local challenges and solutions in identifying viable and sustainable long-term solutions to Arctic challenges.

DHS actively participates in interagency Indigenous Traditional and Ecological Knowledge (ITEK) efforts and is working toward integration of ITEK as appropriate and during the development of further guidance. Components across DHS work closely with Tribal Nations in their area of operation and understand traditional practices and knowledge that can lead to the Department integrating ITEK into the Department's Climate Action Plan or if another approach is appropriate. Like the treaty and reserved rights discussion, the Department can include appropriate workshops at its tribal affairs training sessions. The Department's Climate Change Action Group and subject matter experts supporting existing frameworks will work to identify processes and examine what level of incorporation of ITEK is appropriate for the Department's Climate Action Plan in future revisions and in implementation plans.

5. Environmental Justice

DHS considers environmental justice through alignment with the Department's Environmental Justice Strategy and continued coordination with and oversight from the DHS Environmental Justice Program co-leads at the OCRSO and CRCL. The Climate Action Plan contains specific environmental justice and equity considerations especially as it relates to Departmental decision making in the National Environmental Policy Act (NEPA) process, resilience, services and supply chain, and climate literacy. The Department also commits to expanding outreach to and access for disadvantaged communities regarding financial assistance programs that build climate adaptation capacities.

Since the implementation of the DHS Climate Action Plan, FEMA and Coast Guard solicited input through the *Federal Register* from communities with environmental justice concerns, at large, and Tribal governments, to determine the impacts of climate change and identify ways to better serve communities. Other notable efforts include:

- Creation of the DHS Equity Task Force, charged with leading the Department's implementation of President Biden's equity executive actions, including E.O. 13985
- Re-launch of the internal DHS environmental justice working group
- Finalization of an FY2021-2025 Department Environmental Justice Strategy Implementation Plan, which includes as one of its five overarching goals the integration of environmental justice principles into Department climate change initiatives
- Presentation at the DHS Tribal Summit on environmental justice and environmental compliance information
- Presentation at the National Environmental Justice Conference on the Department's efforts to advance environmental and climate justice through civil rights compliance and enforcement efforts
- Review of all DHS grants and financial assistance programs for applicability of the Justice40 Initiative

In the next year, DHS's environmental justice program will continue to coordinate with Departmental climate, resilience, sustainability, civil rights, and environmental subject matter experts to advance efforts that connect climate and environmental justice. Planned activities include:

- Proactively finalizing a Justice40 implementation plan for non-FEMA financial assistance programs to provide guidance should any Justice40 eligible programs arise
- Publishing an internal environmental justice webpage for DHS employees to learn about environmental and climate justice
- Developing resources and training to enhance climate literacy and its intersections with environmental justice in DHS operational missions and federally assisted programs

- Integrating specific environmental justice priorities in the DHS Federally Assisted Civil Rights Compliance Program
- Drafting of DHS policy and infrastructure for an internal NEPA Warrant Program with environmental justice and climate analysis training modules
- Updating the DHS Environmental Justice Directive to further integrate climate change considerations

6. Partnerships

DHS continued to expand its partnerships to include work with the Department of Defense (DOD), NOAA, NASA, DOE within the federal government. Externally, DHS has formed partnerships with Sandia National Laboratories (SNL) to integrate climate strategy and maintained partnerships with DOE national laboratories NREL and INL with a focus on resilience. Additionally, DHS representatives serve on the National Climate Task Force's Resilience Work Groups to enhance collaboration and ensure a whole-of-government approach.

SECTION 3: NEW TOPICS FROM E.O. 14057

1. Policy Review

In October 2021, DHS published its Strategic Framework For Addressing Climate Change (DHS Strategic Framework). Within the Strategic Framework, DHS lays out five interconnected lines of effort:

- Empower Individuals and Communities to Build Climate Resilience
- Build Readiness to Respond to Increases in Climate-Driven Emergencies
- Incorporate Foresight and Climate Science into Strategy, Policy, Programs, and Budgets
- Invest in a Sustainable and Resilient DHS
- Develop a Climate Change-Informed DHS Workforce

DHS is developing policies to guide efforts in addressing the climate challenge in the future. DHS is pursuing its strategic ends through foresight incorporating climate science, unity of effort and cooperation across all levels of government, and innovation that drive positive impact across the Nation.

DHS internally is reviewing existing climate directives and policies to ensure they are up-to-date and focused on the current crisis at hand. This includes DHS's Climate Directive with directs all DHS Components to assess and adapt to the climate crisis using the tools, resources, and knowledge available.

In addition, the Coast Guard published a request for information in the Federal Register (86 FR 36145) on July 8, 2021. This request for information sought public comment to identify regulations, policies, and procedures that inadvertently contribute to climate change, or fail to support the development and use of technologies that would address climate change such as the use of alternative fuels. The Coast Guard has worked continuously and closely with the U.S. interagency, including the Special Presidential Envoy for Climate, Department of State (DoS), Department of Transportation (DOT), and Environmental Protection Agency (EPA), at the International Maritime Organization to lead decarbonization and carbon intensity reduction efforts aimed to reduce/eliminate emissions from international commercial shipping. The Coast Guard continues to leverage public input and interagency partnerships to improve existing programs and inform future regulatory and policy proposals for the U.S. marine transportation system.

2. Climate Scenario Analysis

CISA developed the NCF risk management framework to assess and manage the risk of a myriad of hazards to our Nation's Critical Infrastructure. The framework strives to be compatible with and integrate into existing CISA risk management efforts. CISA used the NCF framework to support an initial risk

assessment of climate change to critical infrastructure, and to provide a repeatable capacity for ongoing assessment of climate-related risk moving forward. DHS does not have all the climate data and information needed, but it will continue to seek climate science information for decision making.

The Coast Guard utilized climate scenario planning in its Project Evergreen initiative. This long running program is instrumental in adapting the Coast Guard to future climate scenarios. Project Evergreen helped to establish the North Pacific Coast Guard Forum and the adoption of the US Arctic Strategy.

The Department participates on the Advisory Council on Historic Preservation's Climate Change and Historic Preservation Task Force. The Task Force considers climate adaptation and resilience, energy conservation and weatherization, and smart growth for the Nation's historic properties. The discussions have assisted DHS is environmental planning and historic preservation efforts in addition to further consideration of reusing Department historic buildings versus new construction.

With the 2022 release of the Council on Environmental Quality's beta version of the Climate and Economic Justice Screening Tool (CEJST), the EPA's EJScreen 2.0, and GIS capability for the Department's NEPA planning and records tool, the Environmental Planning and Historic Preservation Decision Support System, new tools are available to climate and environmental practitioners. These tools help identify potential disproportionately high and adverse impacts on environmental justice communities by providing various data, to include current and future risks posed by climate change. Additionally, these tools can help with determining the presence of disadvantaged communities to aid in the equitable allocation of federal dollars.

The Federal Flood Risk Management Standard (FFRMS) is a flood standard that aims to build a more resilient future. As stated in Section 1 of Executive Order (E.O.) 13690, "It is the policy of the United States to improve the resilience of communities and Federal assets against the impacts of flooding. These impacts are anticipated to increase over time due to the effects of climate change and other threats. Losses caused by flooding affect the environment, our economic prosperity, and public health and safety, each of which affects our national security." FFRMS was established to encourage Federal agencies to consider and manage current and future flood risks in order to build a more resilient nation. The standard (E.O. 13690) was revoked by Executive Order 13807 and then reinstated through Executive Order 14030, Climate-Related Financial Risk, clarifying that the FFRMS was reestablished and the guidelines for floodplain management under Executive Order 11988 remained in effect.

FEMA will publish a notice of proposed rulemaking to implement the FFRMS with an anticipated publication date in March 2023 (Unified Agenda). In the interim, FEMA is partially implementing the FFRMS through policies and notices of funding opportunity issued for the Hazard Mitigation Assistance (effective August 2021), Grant Programs Directorate (effective FY21), and Public Assistance (effective June 2022) program~~s~~.

As established in E.O. 11988, Floodplain Management, as amended by E.O. 13690, FEMA continues to carry out its responsibility to provide consultation to Federal agencies on managing flood risk, and "…, in consultation with the WRC, the Federal Interagency Floodplain Management Task Force (FIFM-TF), FEMA, and the Council on Environmental Quality (CEQ), issue or amend existing regulations and procedures to comply with this order, and update those regulations and procedures as warranted."

Over 55 Federal departments, agencies and offices have implementing procedures/regulations in place for carrying out the directives of E.O. 11988. Each department/agency head is responsible for assuring implementation. Both FEMA Headquarters and FEMA regional staff provide consultation and guidance to other Federal agencies, generally on a request basis, which has included reviewing other agency procedures when the agency is in the process of creating or updating them. FEMA's Floodplain Management Division is responsible for managing this consultation with other Federal agencies.

Additionally, FEMA, along with CEQ, and the Office of Management and Budget (OMB), co-chairs the White House Flood Resilience Interagency Working Group (IWG) to coordinate Federal agencies' implementation of FFRMS and other flood priorities. FEMA also supports the Flood Resilience IWG's FFRMS Science Subgroup, co-led by the White House Office of Science and Technology Policy, the National Oceanic and Atmospheric Administration, and the U.S. Department of Housing and Urban Development to:

1. Review and update the science underpinning FFRMS so that Federal agencies approach flood implementation with the best-available, actionable science and guidance, and
2. Compile and, as necessary, facilitate development and delivery of science-based implementation resources that support consistent application of FFRMS by Federal agencies and non-Federal partners.